CONGENITAL THROMBOPHILIA. CLINICAL CASE PRESENTATION

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INTRODUCTION

Congenital thrombophilia is a condition that predisposes patients to thrombosis (1). The term thrombophilia is used to describe a blood coagulation disorder that includes a number of conditions with increased risk of blood clot formation (2). Thromboembolic disease during pregnancy is a major cause of maternal morbidity and mortality involving venous or arterial thrombosis and its possible clinical signs as symptoms of antiphospholipidic antibody syndrome and hyperhomocysteinemia (2). The prophylaxis with low molecular weight heparins is recommended, with the onset on the 24th week of gestation (w.g.) or even earlier, performed until labor. The dose and duration of prophylaxis should be decided individually in each clinical case. An interdisciplinary management of these patients is strongly recommended, regarding the involvement of obstetricians, midwives, anesthesiologists and hematologists during perinatal period (3).

RESULTS

Patient G., age 28 years, 35 w.g., multipara. Congenital thrombophilia with the mutation of several genes in the patient and her partner, characterized with the increased risk for thrombosis, confirmed by laboratory examination before pregnancy:

- Fibrinogen mutation G103T
- PAI-1 mutation 4G/5G
- C677T mutation of methylenetetrahydrofolate reductase
- A1298C mutation of methylenetetrahydrofolate reductase
- A66 mutation of methionine synthase reductase
- Hyperhomocysteinemia (level of homocysteine – 14,5 mmol/l)

The **obstetrical history** was complicated by an emergency cesarean section at 30 w.g., performed due to severe preeclampsia, the fetus being diagnosed with diaphragmatic hernia, with the clinical outcome of perinatal death at the first day of life. The patient also had an miscarriage in the first trimester. After the first pregnancy an cholecystectomy was performed due to pronounced symptomatology.

An interdisciplinary management of this patient with involvement of geneticist, hematologists, during perinatal period was performed.

Lab exams. The level of prothrombin, fibrinogen, INR, D-dimer were assessed every 2 weeks, with the onset on 22 w.g., when it was observed increase levels of fibrinogen and D-dimer (tab. 1).

Table 1. *Levels of prothrombin, fibrinogen, INR, D-dimer during pregnancy*

	6 w.g.	8w.g.	10w.g.	12 w.g.	14w.g.	16w.g.	18w.g.	20w.g.	22 w.g.	24 w.g.	26w.g.	28w.g.	30w.g.	32w.g.	34w.g.	35w.g.
Fibrinogen	2,42	2,05	2,75	2,32	2,57	2,53	3,49	4,16	5,74	3,92	3,49	3,52	2,57	2,53	2,32	2,75
Prothrombin	75	76,3	83	85,9	81	86,9	98	106	99,3	95,7	98	97	81	86,9	85,9	83
INR	1,15	1,15	1,12	1,07	1,10	1,09	1,01	1,00	1,05	0,96	1,01	0,98	1,10	1,09	1,07	1,12
D-dimer	0	0	0	0	0	0	0	0	1543	1302	1288	994	688	0	0	0

Treatment. Starting with the 24 w.g., the patient used the following medication: sol. Clexan 0.4/day, tab. Aspirin 75 mg, vitamins group B. The doses were adjusted depending on the laboratory tests results, it was planned to abandon medication before the expected delivery.

Complication. At the 35 w.g. patient was admitted to the hospital, complaining pruritus as a primary symptom, revealed the intensity from 3 to 9 points, according to proposed scale. Physical examination revealed a rash on the back, abdomen, scratching sings on her legs. Liver function tests included increased concentrations of ALAT, ASAT, alkaline phosphatase (Fig.1).

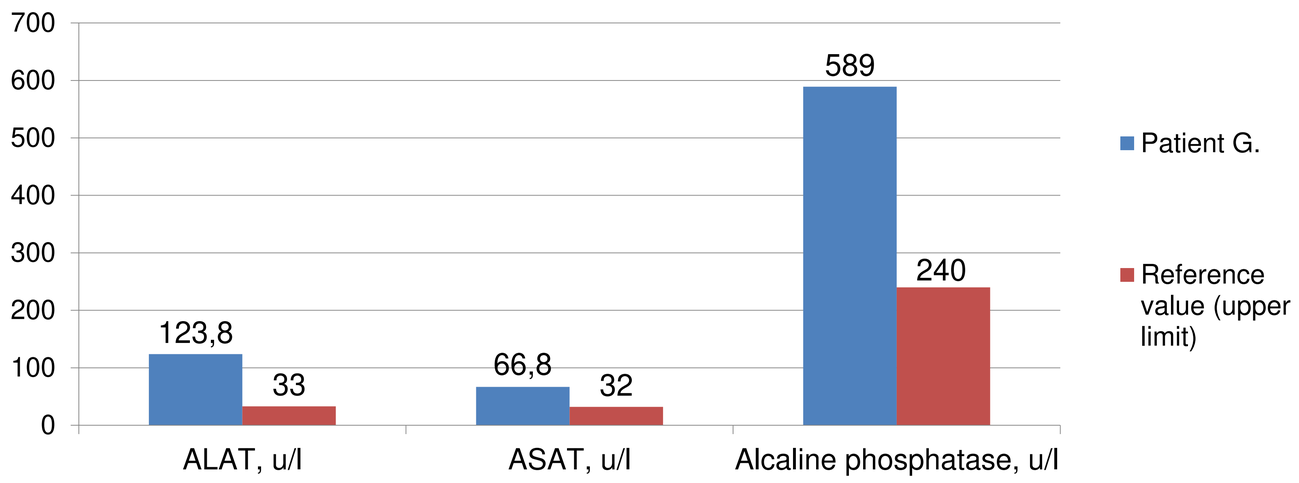

Fig. 1. *Increased concentrations of liver function tests*

Hepatitis B and C markers were tested, resulting absence of acute or chronic viral hepatitis. At this stage a diagnosis of intrahepatic cholestasis of pregnancy was considered. In view of the gestational age, it was decided to begin symptomatic treatment and to monitor this pregnancy and patient status. Clinical management was performed according to the international recommendations.

Management. Elective caesarean section was planned at 37 w.g. At the same time a spontaneous labor has occurred. So, patient G. gave birth with a female fetus, weight 2984 g, Apgar score 8/8 points. Total hemorrhage was estimated 300 ml.

CONCLUSIONS

A complete understanding of congenital thrombophilia is needed, as well as availability of guidelines for appropriate screening, diagnosis, treatment and management during the perinatal period. Many stillbirths and thrombotic events occur in later gestational age, being recognized as a significant risk factors for maternal and fetal mortality and morbidity. According to international recommendations, there is a common practice to induce the labor at 37-38 w.g., to improve perinatal outcomes.

REFERENCES

1.Stevens S., Woller S., Bauer K. et al. Guidance for the evaluation and treatment of hereditary and acquired thrombophilia, Journal of Thrombosis and Thrombolysis, 41(1):154-164, 2016, 10.1007/s11239-015-1316-1

2.Tsikouras P., Deftereou Th., Anthoulaki X. et al. Thrombophilia and Pregnancy: Diagnosis and Management, 2019, DOI: 10.5772/intechopen.85005

3.Colucci G., Tsakiris D. Thrombophilia screening revisited: an issue of personalized medicine. Journal of Thrombosis and Thrombolysis, 49:618–629, 2020, https://doi.org/10.1007/s11239-020-02090-y.